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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/616,018

07/09/2003

Roland Albert

071308.0446

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31625

7590

06/01/2006

BAKER BOTTS L.L.P.  
PATENT DEPARTMENT  
98 SAN JACINTO BLVD., SUITE 1500  
AUSTIN, TX 78701-4039

EXAMINER

KIM, CHONG HWA

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/616,018

Applicant(s)

ALBERT ET AL.

Examiner

Chong H. Kim

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7-12,14-16 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-12,14-16 and 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. Applicant's arguments, see Remarks, filed May 2, 2006, with respect to the rejection(s) of claim(s) 1-5, 7-12, 14-16, and 18-22 under 35 USC 103(a) based on Suzuki et al., which has a filing date after the priority date of Jan 11, 2001, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Chia, Lindberg et al., Loibl et al., Mertol et al., and Baumel et al.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chia, U.S. Patent 4,868,349 and in view of Lindberg et al., U.S. Patent 5,504,378.

Chia shows, in Figs. 1-5, a plastic control plate comprising:

a single piece body 31 having an opening with a bottom wall having at least a partially flat area;

a heat conduction metal body plate 19 having a top surface and a bottom surface, the plate at least partially integrated in the plastic control plate, wherein the heat conduction metal body plate top surface is flush with a top surface of the plastic plate and wherein the bottom surface rests at least partially on the bottom wall of the opening;

but fails to show at least one channel and the heat conduction body being an aluminum plate.

Lindberg et al. shows, in Figs. 1-11, a control plate comprising at least one channel having an opening (formed by 132, 146, and 134).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the heat transfer method of Chia with the heat sink device as taught by Lindberg et al. in order to increase the heat transfer so that the over heating can be reduced thus increasing the life of the device.

As to the matter of the heat conducting body being an aluminum plate, it would have been obvious to make the copper heat conducting body with aluminum in Chia since the Examiner takes Official Notice of the equivalence of aluminum and copper for their use in the heat conducting material in the heat transfer art and the selection of these known material to form the heat sink of Chia would be within the level of ordinary skill in the art.

5. Claims 1-5, 7-12, 14-16, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loibl et al., U.S. Patent 6,160,708 in view of Chia and in view of Lindberg et al., U.S. Patent 5,504,378.

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Loibl et al. shows, in Figs. 1 and 2, an arrangement comprising a single piece plastic control plate body 11 having a bottom wall (on latch 15) having at least a partially flat area, a heat conduction aluminum body plate 10 at least partially integrated in the control plate, a substrate 23 carrying electronic components of the gearbox control electronics system arranged directly on the upper surface of the heat conduction body, wherein the gearbox control electronics system is electronically contacted via a flexible circuit board, wherein the gearbox control electronics system is electronically contacted via a stamped-grid arrangement, which extends partially over the upper surface of the plastic control plate and partially over the upper surface of the heat conduction body, wherein the bottom surface of the metal body plate rests at least partially on the bottom wall of the opening, and wherein the heat conducting plate being flush with the control plate;

but fails to show a plurality of channels formed between the control plate body and the metal heat conduction body.

Lindberg et al. shows, in Figs. 1-11, a control plate comprising a plurality of channels in the form of a U-shape (formed by 132, 146, and 134).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the heat transfer method of Loibl et al with the heat sink device as taught by Lindberg et al. in order to increase the heat transfer so that the over heating can be reduced thus increasing the life of the device.

6. Claims 1-5, 7-12, 14-16, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mertol, U.S. Patent 5,940,271 in view of Linberg et al., in view of Chia, U.S., in view of Baumel et al., U.S. Patent 5,966,291, and in view of Loibl et al.

Mertol shows, in Figs. 11 and 14, an arrangement comprising a single piece plastic control plate 11, an aluminum heat conduction body 8 partially integrated in the plastic control plate, a substrate 2 carrying electronic components arranged directly on the upper surface of the heat conduction body, wherein the control electronics system is electrically contacted via a flexible circuit board, but fails to show the surfaces of the plastic control plate and the heat conduction body being flushed, the heat conduction body forming a U shape wall to form a cooling fluid channel, and the control circuit being a gearbox control circuit.

As to the matter of the surfaces being flushed, Chia, Baumel et al., and Loibl et al. show the heat conducting plates 19, 21, and 10, respectively, each having a top surface that is flushed with the plastic control plates 31, 22, and 11, respectively.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the control system of Mertol with the compacted control system as taught by Chia, Baumel et al., and/or Loibl et al. in order to reduce the size of the control device so that space and weight can be reduced.

Lindberg et al. shows, in Figs. 1-11, a control plate comprising a plurality of channels in the form of a U-shape (formed by 132, 146, and 134).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the heat transfer method of Loibl et al with the heat sink device as

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taught by Lindberg et al. in order to increase the heat transfer so that the over heating can be reduced thus increasing the life of the device.

As to the matter of the gearbox control circuit, Lindberg et al. teaches that the electronic control circuit is utilized to control a gearbox in a vehicle.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the control circuit of Mertol to control a gearbox as taught by Lindberg et al. in order to provide a more effective and efficient control system so that gear shifting is smoother.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Electronic cooling system.

Muso, U.S. Patent 5,631,821

Keiichiro et al., JP 61-226946

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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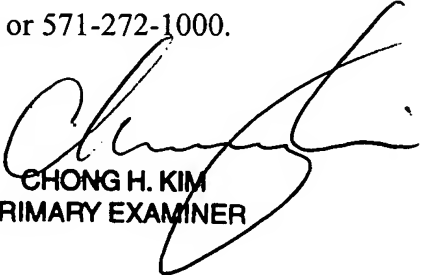
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (571) 272-7108. The examiner can normally be reached on Monday - Friday; 6:00 - 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

chk  
May 30, 2006

  
CHONG H. KIM  
PRIMARY EXAMINER